



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Application No. (if known): 10/776,687

Attorney Docket No.: 105090-236

## Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on January 25, 2005  
Date



Signature

Kevin Cronin

Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

IDS (Citation) by Applicant



PTO/SB/21 (02-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)		Application Number	10/776,687-Conf. #3813
		Filing Date	February 10, 2004
		First Named Inventor	Gregory B. Altshuler
		Art Unit	3732
		Examiner Name	Not Yet Assigned
Total Number of Pages in This Submission	6	Attorney Docket Number	105090-0236

ENCLOSURES (Check all that apply)		
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance communication to Technology Center (TC)
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment/Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below):
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Copies of: International Search Report; Written Opinion; Foreign and Non-Patent references
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	Return postcard
<input type="checkbox"/> Certified Copy of Priority Document(s)	Remarks	
<input type="checkbox"/> Response to Missing Parts/Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	NUTTER MCCLENNEN & FISH LLP Kevin Cronin
Signature	
Date	January 25, 2004

Transmittal	
I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1458, Alexandria, VA 22313-1450, on the date shown below.	
Dated: January 25, 2004	Signature:  (Kevin Cronin)



I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail, in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: January 25, 2005

Signature: 

(Kevin Cronin)

Docket No.: 105090-0236  
(PATENT)

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Gregory B. Altshuler et al.

Application No.: 10/776,687

Confirmation No.: 3813

Filed: February 10, 2004

Art Unit: 3732

For: TISSUE PENETRATING ORAL  
PHOTOTHERAPY APPLICATOR

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. In accordance with 37 CFR 1.97(h), the filing of this Information Disclosure statement shall not be construed to be an admission that any patent, publication or other information referred to therein is "prior art" for this invention unless specifically designated as such.

It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 141449, under Order No. 105090-0236.

Dated: January 25, 2005

Respectfully submitted,

By 

Kevin Cronin

Registration No.: 47,203

NUTTER MCCLENNEN & FISH LLP

World Trade Center West

155 Seaport Boulevard

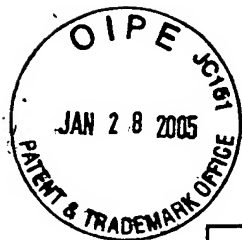
Boston, Massachusetts 02210-2604

(617) 439-2000

(617) 310-9000 (Fax)

Attorney for Applicant

1338363.1



PTO/SB/08a/b (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/776,687 – Conf. # 3813
				Filing Date	February 10, 2004
				First Named Inventor	Gregory B. Altshuler
				Art Unit	3732
				Examiner Name	Not Yet Assigned
Sheet	1	of	3	Attorney Docket Number	105090-0236

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-1,590,283	06-29-1926	Catlin	
	AB	US-3,261,978	07-19-1966	Brenman	
	AC	US-3,667,454	06-06-1972	Prince	
	AD	US-4,333,197	01-08-1982	Kuris	
	AE	US-4,784,135	11-15-1988	Blum et al.	
	AF	US-4,930,504	06-05-1990	Diamantopoulos et al.	
	AG	US-5,030,090	07-09-1991	Maeda et al.	
	AH	US-5,171,564	12-15-1992	Nathoo et al.	
	AI	US-5,369,831	12-06-1994	Bock	
	AJ	US-5,561,881	10-08-1996	Klinger et al.	
	AK	US-5,611,793	03-18-1997	Wilson et al.	
	AL	US-5,616,140	04-01-1997	Prescott	
	AM	US-5,658,148	08-19-1997	Neuberger et al.	
	AN	US-5,673,451	10-07-1997	Moore et al.	
	AO	US-5,974,616	11-02-1999	Dreyfus	
	AP	US-6,026,828	02-22-2000	Altshuler	
	AQ	US-6,029,304	02-29-2000	Hulke et al.	
	AR	US-6,056,548	05-02-2000	Neuberger et al.	
	AS	US-6,086,363	07-11-2000	Moran et al.	
	AT	US-6,106,294	08-22-2000	Daniel	
	AU	US-6,135,774	10-24-2000	Hack et al.	
	AV	US-6,290,496	09-18-2001	Azar et al.	
	AW	US-6,387,353	05-14-2002	Jensen et al.	
	AX	US-6,471,716	10-29-2002	Pecukonis	
	AY	US-6,503,486	01-07-2003	Xu et al.	
	AZ	US-2002/0018754	02-14-2002	Sagel et al.	
	AA1	US-2002/0081555	06-27-2002	Wiesel	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)				
	BA	CN 1073607 A	06-30-1993	Wang Wenhui	Abstract Only	
	BB	DE 198 03 460 C1	08-12-1999	Hauptmann et al.		
	BC	EP 0 324 120 A1	07-19-1989	Hideo Suyama		
	BD	EP 0 563 953 A2	04-01-1993	Warnke		
	BE	EP 0 593 375 A1	10-15-1992	Levy		
	BF	EP 0 927 544 A2	07-07-1999	Altshuler		
	BG	JP 2174804 A2	07-06-1990	Fukaba Hiroshi	Abstract Only	
	BH	JP 6022871 A2	02-01-1994	Niida Hideyo	Abstract Only	
	BI	JP 10014661 A2	01-20-1998	Mogami Kinue	Abstract Only	
	BJ	WO 95/10243	04-20-1995	Mendes et al.		
	BK	WO 98/06456	02-19-1998	Chen et al.		
	BL	WO 99/10046	03-04-1999	Biel		
	BM	WO 99/43387	02-09-1999	Azar et al.		
	BN	WO 99/62472	12-09-1999	Wolf		

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/776,687 – Conf. # 3813
				Filing Date	February 10, 2004
				First Named Inventor	Gregory B. Altshuler
				Art Unit	3732
				Examiner Name	Not Yet Assigned
Sheet	2	of	3	Attorney Docket Number	105090-0236

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	SHUMILOVITCH et al., "Influence Of Low Intensity Laser Radiation Upon The Microflora Of Carious Cavities And Root Canal," SPIE Vol. 1984, pp. 215-220	
	CB	SANDFORD et al., "Thermal Effects During Desensitisation of Teeth with Gallium-Aluminum-Arsenide Lasers, University of Queensland Dental School, Periodontology 1994; 15:25-30	
	CC	FORREST-WINCHESTER et al., "The Effect of Infrared Laser Radiation on Dentinal Permeability in vitro, Department of Dentistry, University of Queensland Dental School, pp. 1-8, 1992	
	CD	POWELL, "Laser Dental Decay Prevention: does it have a future?" SPIE vol. 3192, 1997	
	CE	WESTERMAN et al., "Argon Laser Irradiation Effects on Sound Root Surfaces: <i>In Vitro</i> Scanning Electron Microscopic Observations," Journal of Clinical Laser Medicine and Surgery, Vol. 16, No. 2, pp. 111-115, 1998	
	CF	BLANKENAU et al., "In Vivo Caries-Like Lesion Prevention with Argon Laser: Pilot Study," Journal of Clinical Laser Medicine and Surgery, Vol. 17, No. 6, pp. 241-243, 1999	
	CG	HSU et al., "Combined Effects of Laser Irradiation/Solution Fluoride Ion on Enamel Demineralization," Journal of Clinical Laser Medicine and Surgery, Vol. 16, No. 2 pp. 93-105, 1998	
	CH	HICKS et al., "After Low Fluence Argon Laser and Fluoride Treatment," Compendium, Vol. 18, No. 6, June 1997	
	CI	HICKS et al., "Enamel Caries Initiation and Progression Following Low Fluence (energy) and Argon Laser and Fluoride Treatment," The Journal of Clinical Pediatric Dentistry, Vol. 20, No. 1 pp. 9-13, 1995	
	CJ	OLEINIK, et al., "Automatized Securing Definition for Laser Therapy Indications in Case of Non-complicated Caries," SPIE, Vol. 1984, pp.238-244	
	CK	KAZMINA, et al., "Laser Prophylaxis and Treatment of Primary Caries," SPIE Vol. 1984, pp. 231-233	
	CL	SOKOLOVA, et al., "Low-intense Laser Radiation in Complex Treatment of Inflammatory Diseases of Parodontium," SPIE Vol. 1984, pp. 234-237	
	CM	PETRISCHEV, et al. "Clinical and Experimental Low-Intensive Laser Therapy in Dentistry, SPIE, Vol. 1984, pp. 212-214	
	CN	MAMEDOVA, et al., "Microbiological Estimate of Parodontis Laser Therapy Efficiency, SPIE Vol. 1984, pp. 247-249	
	CO	KOZLOV, et al., "Lasers in Diagnostics and Treatment of Microcirculation Disorders Under Parodontitis," SPIE Vol. 1984, pp. 253-264	
	CP	KALIVRADZHIYAN, et al., "The Usage of Low Intensity Laser Radiation for the Treatment of the Inflammatory processes of the Oral Cavity Mucosa after Applying Removable Plate Dentures," SPIE Vol. 1984 pp. 225-230	
	CQ	WALSH, "Laser "Curettage": a Critical Analysis," Periodontology 14:4-12, 1993	
	CR	OZAWA, et al., "Stimulatory Effects of Low-Power Laser Irradiation on Bone Formation <i>in vitro</i> ," SPIE Vol. 1984, pp. 281-288	
	CS	SHIMIZU, et al., "Prospect of Relieving Pain Due to Tooth Movement During Orthodontic	

Examiner Signature	Date Considered
--------------------	-----------------

Substitute for form 1449A/B/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  <i>(Use as many sheets as necessary)</i>				Application Number	10/776,687 – Conf. # 3813
				Filing Date	February 10, 2004
				First Named Inventor	Gregory B. Altshuler
				Art Unit	3732
				Examiner Name	Not Yet Assigned
Sheet	3	of	3	Attorney Docket Number	105090-0236

		Treatment Utilizing a GA-Al-As Diode Laser," SPIE Vol. 1984, pp. 275-280	
	CT	PETRISCHEV, et al., "Report on Low Intensity Laser Radiation Usage in Dentistry, SPIE Vol. 1984, pp. 202-211	
	CU	KARU, "Photobiological Fundamentals of Low-Power Laser Therapy, 8 <sup>th</sup> Congress of International Society for Laser Surgery and Medicine, March 30, 1987	
	CV	SCHINDL, "Does Low Intensity Laser Irradiation Really Cause Cell Damage?" Lasers in Surgery and Medicine Vol. 22, pp. 105, 2001	
	CW	GROSSMAN, et al., "780 nm Low Power Diode Laser Irradiation Stimulates Proliferation of Keratinocyte Cultures: Involvement of Reactive Oxygen Species," Lasers in Surgery and Medicine Vol. 29, pp. 212-218, 1998	
	CX	KARU, "Cell Attachment to Extracellular Matrices is Modulated by Pulsed Radiation at 820 nm and Chemicals that Modify the Activity of Enzymes in the Plasma Membrane," Lasers in Surgery and Medicine, Vol. 29, pp. 274-281, 2001	
	CY	MAEGAWA, et al., "Effects of Near-Infrared Low-Level Laser Irradiation on Microcirculation," Lasers in Surgery and Medicine, Vol. 27, pp. 427-437, 2000	
	CZ	VAN BREUGEL, "Power Density and Exposure Time of He-Ne Laser Irradiation Are More Important Than Total Energy Dose in Photo-Biomodulation of Human Fibroblasts in Vitro," Lasers in Surgery and Medicine, Vol. 12 pp. 528-537, 1992	
	CA1	MANG, "Effect of Soft Laser Treatment on Wound Healing in the Hamster Oral Mucosa," American Society for Laser Medicine and Surgery Abstracts, Chapters 25, pp. 5-8,	
	CB1	ALTSHULER, et al., "Modern Optics and Dentistry," Laser in Dentistry, pp. 283-297, 1995	
	CD1	ALTSHULER, et al., "New Optical Effects in the Human Hard Tooth Tissues," Lasers and Medicine, Proc. SPIE Vol. 1353, pp. 97-102, 1989	
	CE1	ALTSHULER, et al., "Human Tooth as an Optical Device," SPIE Vol. 1429 Holography and Interferometry and Optical Pattern Recognition in Biomedicine," pp. 95-104, 1991	
	CF1	OHBA YASHI, "Stimulatory Effect of Laser Irradiation on Calcified Nodule Formation in Human Dental Pulp Fibroblasts," ABSTRACT J-Endod. 1999 Jan; 25(1): 30-3	
	CG1	ORCHARDSON, "Effect of Pulsed Nd:YAG Laser Radiation on Action Potential Conduction in Nerve Fibres Inside Teeth in vitro," ABSTRACT J-Dent. 1998 Jul-Aug; 26(5-6): 421-6	
	CH1	DABROWSKA, "Intravital Treatment of the Pulp with Stimulation Laser Biostimulation," ABSTRACT Rocz-Akad-Med-Bialymst. 1997; 42(1): 168-76	
	CI1	SING, "Electroacupuncture and Laser Stimulation Treatment: Evaluation by Somatosensory Evoked Potential in Conscious Rabbits," ABSTRACT AM-J-Chin-Med. 1997; 25(3-4): 263-71	
	CJ1	WALSH, "The Current Status of Low Level Laser Therapy in Dentistry. Part 1. Soft Tissue Applications" paper prepared by LJ Walsh, Department of Dentistry University of Queensland, pp1-16. Publication date unknown.	
	CK1	DIALOG ABSTRACT (English Language) of DE1920803460, Hauptmann, G., et al.	

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature		Date Considered	
--------------------	--	-----------------	--